

WHAT IS CLAIMED IS:

- 1 1. A method of identifying an agent that binds to CCX-CKR2 on a cell,
2 the method comprising,
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and
6 selecting an agent that competes with I-TAC or SDF1 for binding to the CCX-
7 CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to CCX-
8 CKR2 on a cell.

- 1 2. The method of claim 1, wherein the cell is a cancer cell.

- 1 3. The method of claim 1, further comprising testing the selected agent
2 for the ability to bind to, or inhibit growth of, a cell.

- 1 4. The method of claim 3, wherein the cell is a cancer cell.

- 1 5. The method of claim 1, further comprising testing the selected agent
2 for the ability to alter kidney function.

- 1 6. The method of claim 1, further comprising testing the selected agent
2 for the ability to alter brain or neuronal function.

- 1 7. The method of claim 1, further comprising testing the selected agent
2 for the ability to change cell adhesion to endothelial cells.

- 1 8. The method of claim 1, wherein the agent is less than 1,500 daltons.

- 1 9. The method of claim 1, wherein the agent is an antibody.

- 1 10. The method of claim 1, wherein the CCX-CKR2 polypeptide
2 comprises the sequence displayed in SEQ ID NO:2.

- 1 11. A method for determining the presence or absence of a cancer cell, the
2 method comprising,
3 contacting a sample comprising a cell with an agent that specifically binds
4 with SEQ ID NO:2; and

5 detecting binding of the agent to a polypeptide in the sample, wherein binding
6 of the agent to the sample indicates the presence of a cancer cell.

12. The method of claim 11, wherein the agent is an antibody.

13. The method of claim 11, wherein the agent is less than 1500 daltons.

14 The method of claim 11, wherein the polypeptide detected is SEQ ID

2 NO:2

15. The method of claim 11, wherein the sample is from a human.

1 17. The method of claim 11, wherein the method is used to provide a
2 prognosis of cancer in a human.

1 21. A method of providing a diagnosis or prognosis of an individual
2 having cancer, the method comprising detecting the presence or absence of expression of a
3 polynucleotide encoding a CCX-CKR2 polypeptide in a cell of an individual, wherein the
4 CCX-CKR2 polypeptide binds I-TAC and/or SDF1 and the CCX-CKR2 polypeptide is at
5 least 95% identical to SEQ ID NO:2, thereby diagnosing a cancer in the individual.

1 23. The method of claim 21, wherein the cancer is selected from the group
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and
3 leukemia.

1 24. The method of claim 21, wherein the cancer is not Kaposi's sarcoma,
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.

1 25. An antibody that specifically competes with SDF-1 and I-TAC for
2 binding to SEQ ID NO:2.

1 26. The antibody of claim 25, wherein the antibody is a monoclonal
2 antibody.

1 27. The antibody of claim 25, wherein the antibody is a humanized
2 antibody.

1 28. A method comprising,
2 contacting a cell with an agent that specifically binds to SEQ ID NO:2,
3 wherein the agent competes with SDF-1 and I-TAC for binding to a CCX-CKR2 polypeptide,
4 and wherein the cell expresses a CCX-CKR2 polypeptide comprising an extracellular domain
5 at least 95% identical to an extracellular domain of SEQ ID NO:2, thereby binding the agent
6 to the CCX-CKR2 polypeptide on the cell.

1 29. The method of claim 28, wherein the agent is less than 1,500 daltons.

1 30. The method of claim 28, wherein the agent is an antibody.

1 31. The method of claim 28, wherein the CCX-CKR2 polypeptide is as
2 displayed in SEQ ID NO:2.

1 32. The method of claim 28, wherein the agent is identified by a method
2 comprising
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and

6 selecting an agent that competes with I-TAC or SDF-1 for binding to the
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a
8 cancer cell.

1 33. A method of treating cancer in an individual, the method comprising
2 administering to the individual a therapeutically effective amount of an agent that competes
3 with SDF1 and I-TAC for binding to SEQ ID NO:2.

1 34. The method of claim 33, wherein the agent is less than 1,500 daltons.

1 35. The method of claim 33, wherein the agent is an antibody.

1 36. The method of claim 33, wherein the agent is identified by a method
2 comprising
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and

6 selecting an agent that competes with I-TAC or SDF-1 for binding to the
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a
8 cancer cell.

1 37. The method of claim 33, wherein the cancer is selected from the group
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and
3 leukemia.

1 38. The method of claim 33, wherein the cancer is not Kaposi's sarcoma,
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.